File

DEPARTMENT OF THE ARMY
ST. LOUIS DISTRICT, CORPS OF ENGINEERS
8945 LATTY AVENUE
BERKELEY, MISSOURI 63134

REPLY TO
ATTENTION OF:

April 25, 2003

Formerly Utilized Sites Remedial Action Program Project Office

SUBJECT: Transmittal of First Quarter of 2003 Discharge Report for NPDES Permit MO-0111252 and Applicable or Relevant and Appropriate Requirements (ARARs) for Discharges to the Waters of the State in North St. Louis County, MO

Mr. Kurt Riebeling
Chief, Water Unit
Missouri Department of Natural Resources
9200 Watson Road, Suite 201
St. Louis, MO 63127-1038

Dear Mr. Riebeling:

In accordance with NPDES Permit MO-0111252 for the Hazelwood Interim Storage Site (HISS), and the substantive requirements for storm-water discharge to the waters of the state at the St. Louis Airport Site (SLAPS), St. Louis, MO, this letter transmits the storm-water discharge monitoring report for the first quarter of 2003. Attachment A of this report contains the available analytical results for the first quarter of 2003 for storm-water Outfalls 001, 002, and 003 at HISS. Attachment B contains the analytical results for storm-water Outfalls 001a, 001b, and 002 at SLAPS.

- Hazelwood Interim Storage Site (HISS)
  During the first quarter of 2003, permit-specified parameters were measured in January, February, and March. All of the total organic halogen (TOX) were qualified as unreliable, R, as a result of breakthrough. The analytical criterion, that all second-column measurements for a properly operating system should not exceed 10% of the two-column total measurement, was not met. It appeared that a high random bias occurred. The samples were rerun, and the re-analyses coincided with the original analyses. Although, the TOX data for this sampling effort were unreliable, historically the TOX results have been positive thereby requiring the volatile (VOC) and semi-volatile (SVOC) organic compounds analyses to identify the specific constituent as specified in the permit. Acetone was present at an estimated quantity below the practical quantitation limit (PQL) for Outfalls 001, 002 and 003. Carbon disulfide was present below PQL for Outfalls 001 and 002; and styrene was present below PQL for 001. Acetone is often associated with laboratory contamination. Outfall 002 experienced a power outage from March 11 to March 13 and therefore was unable to record flow. Outfall 003 did not receive a settleable solid sample for January due to insufficient flow.

- St. Louis Airport Site (SLAPS)
  During the first quarter of 2003 there were five rainfall events. There are no exceedences to report per the monitoring requirements of the permit. Chemical analyses could not be conducted during the month of January due to insufficient volume collected by the auto sampler. There were no more events in the month. As per MDNR letter from Mr. Matthew Sikes addressed to Ms. Sharon Cotner dated 2/19/02, sampling at Outfall 002 has been reduced to once a year, and sampling at Outfall 003 has been discontinued.

Should you have any comments or questions regarding this letter, please feel free to contact either Dr. Greg Hempen at (314) 260-3939 or Mr. Ron Frerker at (314) 260-3936.

Sincerely,

Sharon R Cotner

Sharon R. Cotner
FUSRAP Program Manager

Enclosures

ATTACHMENT A

QUARTERLY DISCHARGE MONITORING REPORT FOR THE HAZELWOOD INTERIM STORAGE SITE

First Quarter 2003 – Storm-water Discharge Monitoring Report
Hazelwood Interim Storage Site, St. Louis, MO

FACILITY NAME	PERMIT NUMBER	COUNTY	OWNER	FACILITY CONTACT
Hazelwood Interim Storage Site (HISS)[1]	MO-0111252	St. Louis	Jarboe Realty Investment	S.R. Cotner, Program Manager, USACE
OPERATOR OF FACILITY			TYPE OF FACILITY	
United States Army Corps of Engineers (USACE)			Standard Industrial Classification –9999, non-classifiable[1]	
REQUIRED FREQUENCY OF MONITORING				THIS REPORT COVERS
Flow and rainfall – daily; Settleable solids – monthly; Other parameters[2] – quarterly				1st Quarter- January 2003 – March 2003
SAMPLES COLLECTED BY				
David Lee and Lon Hoover				
ANALYSIS PERFORMED BY				
Severn-Trent (chemical analyses) and FUSRAP Laboratory (radiological analyses)				
SAMPLE LOCATION	MONTH and TIME		MONTH and TIME	MONTH and TIME
Outfall 1	01/03/03@1335		02/14/03@0815	03/13/03@1110
Outfall 2	01/03/03@1337		02/14/03@0825	03/13/03@1125
Outfall 3	NS		02/14/03@0810	03/13/03@1020

MONITORING PARAMETER	LIMITS[3]	UNITS[4]	ANALYTICAL RESULTS AND DATA QUALIFIERS			SAMPLE TYPE	REMARKS and COMMENTS
			OUTFALL 1	OUTFALL 2	OUTFALL 3		
Settleable solids[5]: January	Daily max=1.5 Monthly avg=1.0	mL/L/hr	<0.2[6]	<0.2[6]	NS	Grab	
February		mL/L/hr	<0.2[6]	<0.10[6]	<0.2[6]	Grab	
March		mL/L/hr	<0.2[6]	<0.2[6]	<0.2[6]	Composite	
pH	6.0-9.0	SU	8.2	8.7	8.5	Composite	Taken in field
Specific conductance	Monitor Only	µmhos/cm	0.53	0.34	0.27	Composite	Taken in field
Total organic carbon[6]	Monitor Only	mg/L	13	6.2	5.9	Composite	
Total organic halogen[6]	Monitor Only	mg/L	[8]	[8]	[8]	Composite	
Gross alpha	Monitor Only	pCi/L	[9]	[9]	[9]	Composite	
Gross beta	Monitor Only	pCi/L	[9]	[9]	[9]	Composite	
Lead 210	Monitor Only	pCi/L	<0.49	<0.36	<1.4	Composite	Assumes secular equilibrium with Ra-226
Radium 226	Monitor Only	pCi/L	<0.49	<0.36	<1.4	Composite	
Radium 228	Monitor Only	pCi/L	0.61	1.4	1.9	Composite	Assumes secular equilibrium with Th-228
Uranium, total	Monitor Only	pCi/L	<41[10]	120	<3.2	Composite	Calculated Value: addition of iso-analysis
Thorium 230	Monitor Only	pCi/L	6.5	5.2	11	Composite	
Thorium 232	Monitor Only	pCi/L	<0.15[10]	<0.16	0.56	Composite	
Rainfall	Monitor Only	inches	See Table 1	See Table 1	See Table 1	24-hr total	Continuous recorder
Flow	Monitor Only	MGD	See Table 1	See Table 1	See Table 1	24-hr total	Continuous recorder
REPORT APPROVED BY OWNER Sharon Cotner for US Army Corps of Engineers						DATE 4/24/03	

NOTES:

1 HISS is a CERCLA NPL.
2 Collect quarterly samples in the months of March, June, September, and December for: pH, specific conductance, total organic carbon (TOC), total organic halogen (TOX), gross alpha, gross beta, Pb-210, Ra-226, Ra-228, Uranium (total), Th-230, and Th-232.
3 Final limits as specified in the permit for settleable solids and pH.
4 Results are reported in required units per permit.
5 Settleable Solids Sample Method = EPA 160.5. See Table 2 for Data Qualifiers.
6 The MDA was used because the analysis did not result in a value above the MDA.
7 The MDA was used because isotopic analysis was reported as negative.
8 Total organic halogen (TOX) was rejected due to breakthrough
9 Data has not been analyzed for the quarter.
10 See Table 2 for VOC and SVOC data.
NS No sample - insufficient flow to collect samples "no discharge".

First Quarter 2003 - [redacted]wood Interim Storage Site
Daily Rainfall and Daily Maximum Flow

Table 1 - NPDES Daily Flow and Rainfall Data

Date	Rainfall (inches)	Maximum Daily Flow (MdD)a		
		Outfall 001	Outfall 002	Outfall 003
01-Jan-03				
02-Jan-03		0.16[c]		0.080[c]
03-Jan-03[b]	0.10	[d]	0.010[c]	0.020[c]
04-Jan-03	0.11		0.900	
05-Jan-03	0.08		0.050	
06-Jan-03			0.010	
07-Jan-03				
08-Jan-03				
09-Jan-03	0.05			
10-Jan-03				
11-Jan-03				
12-Jan-03				
13-Jan-03				
14-Jan-03	0.02			
15-Jan-03				
16-Jan-03				
17-Jan-03				
18-Jan-03				
19-Jan-03				
20-Jan-03				
21-Jan-03				
22-Jan-03			0.010[c]	
23-Jan-03				0.13[c]
24-Jan-03				0.050[c]
25-Jan-03				
26-Jan-03	0.01			
27-Jan-03				
28-Jan-03				
29-Jan-03				
30-Jan-03[b]				
31-Jan-03	0.21			
Monthly Average		0.00	0.032	0.010

Date	Rainfall (inches)	Maximum Daily Flow (MdD)a		
		Outfall 001	Outfall 002	Outfall 003
1-Feb-03[b]				
2-Feb-03				
3-Feb-03				
4-Feb-03				
5-Feb-03				
6-Feb-03	0.04	0.82[c]		
7-Feb-03		1.6		
8-Feb-03		1.1		
9-Feb-03				
10-Feb-03	0.04			
11-Feb-03		0.21[f]		
12-Feb-03				
13-Feb-03				
14-Feb-02[b]	0.51	0.020	0.030	
15-Feb-03	0.20	0.040	0.020	
16-Feb-03		1.1c	0.080[c]	0.080[c]
17-Feb-03		0.64[c]	0.030[c]	0.11[c]
18-Feb-03	0.18	0.020	0.060	0.13
19-Feb-03	0.18	0.040	0.030	
20-Feb-03				
21-Feb-03		0.020[f]		
22-Feb-03	0.09	0.020[c]		
23-Feb-03		0.13[c]		
24-Feb-03		0.070		
25-Feb-03				0.080
26-Feb-03				
27-Feb-03		0.010[c]		
28-Feb-03	0.08	0.16[c]		
Monthly Average		0.22	0.010	0.010

Date	Rainfall (inches)	Maximum Daily Flow (MdD)a		
		Outfall 001	Outfall 002	Outfall 003
1-Mar-03	0.04	0.02C	0.010	
2-Mar-03			0.010	
3-Mar-03				
4-Mar-03				
5-Mar-03				
6-Mar-03	0.01			
7-Mar-03				
8-Mar-03				
9-Mar-03				
10-Mar-03				
11-Mar-03	0.28		[g]	
12-Mar-03	0.05	0.010	[g]	
13-Mar-03[b]	0.63	0.20	0.010[g]	0.020
14-Mar-03				
15-Mar-03				
16-Mar-03				
17-Mar-03				
18-Mar-03	0.02			
19-Mar-03	0.80	0.11	0.080	
20-Mar-03	0.19	0.10	0.060	
21-Mar-03				
22-Mar-03				
23-Mar-03				
24-Mar-03				
25-Mar-03	0.03			
26-Mar-03				
27-Mar-03				
28-Mar-03	0.23			
29-Mar-03				
30-Mar-03				
31-Mar-03				
Monthly Average		0.010	0.00	0.00

NOTES:

[a] Daily maximum flow values are based on 24-hour flow and recorded as million gallons per day. All blank spaces represent zero flow.

[b] Compliance samples collected on this day for the month indicated.

[c] Data results may be due to snow on flume.

[d] Operator recalibrated logger while snow was present on primary measuring device, causing logger to not record snow melt runoff.

[e] Monthly average includes daily values except readings associated with calibration, equipment/operator error and power failure. Used the maximum daily flow for computation.

[f] Data results are due to calibrated flowmeter/sensor. Therefore, the activity was interpreted as a level reading by the sensor and converted to flow reading by the meter.

[g] Power failure to logger at Outfall 002 occurred from 3/11/03 at 1100 to 3/13/03 at 0800.

All data taken to two significant digits; however, this may be limited based on the accuracy of instrumentation (i.e., rainfall).

Flow was measured continuously using ISCO Model 4210 Ultrasonic flow meters installed at each outfall.

StationName	SampleName	SampleCollectionDate	AnalyteName	AnalyticalResult	DetectionLimit	AnalyticalResultsUnits	ValidationQualifier
HN01	HIS74391	01/03/03	Settleable Solids (SS)	0	0.2	mL/L/hr	U
HN01	HIS74506	02/14/03	Settleable Solids (SS)	0	0.2	mL/L/hr	U
HN01	HIS74509	03/13/03	1,1,1-Trichloroethane	5	5	ug/L	U
HN01	HIS74509	03/13/03	1,1,2,2-Tetrachloroethane	5	5	ug/L	U
HN01	HIS74509	03/13/03	1,1,2-Trichloro-1,2,2-trifluoroethane	5	5	ug/L	U
HN01	HIS74509	03/13/03	1,1,2-Trichloroethane	5	5	ug/L	U
HN01	HIS74509	03/13/03	1,1-Dichloroethane	5	5	ug/L	U
HN01	HIS74509	03/13/03	1,1-Dichloroethene	5	5	ug/L	U
HN01	HIS74509	03/13/03	1,2,4-Trichlorobenzene	10	10	ug/L	U
HN01	HIS74509	03/13/03	1,2-Dichlorobenzene	10	10	ug/L	U
HN01	HIS74509	03/13/03	1,2-Dichloroethane	5	5	ug/L	U
HN01	HIS74509	03/13/03	1,2-Dichloroethene (Total)	10	10	ug/L	U
HN01	HIS74509	03/13/03	1,2-Dichloropropane	5	5	ug/L	U
HN01	HIS74509	03/13/03	1,3-Dichlorobenzene	10	10	ug/L	U
HN01	HIS74509	03/13/03	1,4-Dichlorobenzene	10	10	ug/L	U
HN01	HIS74509	03/13/03	2,4,5-Trichlorophenol	10	10	ug/L	U
HN01	HIS74509	03/13/03	2,4,6-Trichlorophenol	10	10	ug/L	U
HN01	HIS74509	03/13/03	2,4-Dichlorophenol	10	10	ug/L	U
HN01	HIS74509	03/13/03	2,4-Dimethylphenol	10	10	ug/L	U
HN01	HIS74509	03/13/03	2,4-Dinitrophenol	25	25	ug/L	U
HN01	HIS74509	03/13/03	2,4-Dinitrotoluene	10	10	ug/L	U
HN01	HIS74509	03/13/03	2,6-Dinitrotoluene	10	10	ug/L	U
HN01	HIS74509	03/13/03	2-Butanone	20	20	ug/L	U
HN01	HIS74509	03/13/03	2-Chloronaphthalene	10	10	ug/L	U
HN01	HIS74509	03/13/03	2-Chlorophenol	10	10	ug/L	U
HN01	HIS74509	03/13/03	2-Hexanone	20	20	ug/L	U
HN01	HIS74509	03/13/03	2-Methylnaphthalene	10	10	ug/L	U
HN01	HIS74509	03/13/03	2-Methylphenol	10	10	ug/L	U
HN01	HIS74509	03/13/03	2-Nitroaniline	25	25	ug/L	U
HN01	HIS74509	03/13/03	2-Nitrophenol	10	10	ug/L	U
HN01	HIS74509	03/13/03	3,3'-Dichlorobenzidine	10	10	ug/L	U
HN01	HIS74509	03/13/03	3-Nitroaniline	25	25	ug/L	U
HN01	HIS74509	03/13/03	4,6-Dinitro-2-methylphenol	25	25	ug/L	U
HN01	HIS74509	03/13/03	4-Bromophenyl phenyl ether	10	10	ug/L	U
HN01	HIS74509	03/13/03	4-Chloro-3-methylphenol	10	10	ug/L	U
HN01	HIS74509	03/13/03	4-Chloroaniline	10	10	ug/L	U
HN01	HIS74509	03/13/03	4-Chlorophenyl phenyl ether	10	10	ug/L	U
HN01	HIS74509	03/13/03	4-Methyl-2-pentanone	20	20	ug/L	U
HN01	HIS74509	03/13/03	4-Methylphenol	20	20	ug/L	U
HN01	HIS74509	03/13/03	4-Nitroaniline	25	25	ug/L	U
HN01	HIS74509	03/13/03	4-Nitrophenol	25	25	ug/L	U
HN01	HIS74509	03/13/03	Acenaphthene	10	10	ug/L	U
HN01	HIS74509	03/13/03	Acenaphthylene	10	10	ug/L	U
HN01	HIS74509	03/13/03	Acetone	5.1999998	20	ug/L	J

StationName	SampleName	SampleCollectionDate	AnalyteName	AnalyticalResult	DetectionLimit	AnalyticalResultsUnits	ValidationQualifier
HN01	HIS74509	03/13/03	Anthracene	10	10	ug/L	U
HN01	HIS74509	03/13/03	Benzene	5	5	ug/L	U
HN01	HIS74509	03/13/03	Benzo(a)anthracene	10	10	ug/L	U
HN01	HIS74509	03/13/03	Benzo(a)pyrene	10	10	ug/L	U
HN01	HIS74509	03/13/03	Benzo(b)fluoranthene	10	10	ug/L	U
HN01	HIS74509	03/13/03	Benzo(g,h,I)perylene	10	10	ug/L	U
HN01	HIS74509	03/13/03	Benzo(k)fluoranthene	10	10	ug/L	U
HN01	HIS74509	03/13/03	Bis(2-chloroethoxy) methane	10	10	ug/L	U
HN01	HIS74509	03/13/03	Bis(2-chloroethyl) ether	10	10	ug/L	U
HN01	HIS74509	03/13/03	Bis(2-chloroisopropyl) ether	10	10	ug/L	U
HN01	HIS74509	03/13/03	Bis(2-ethylhexyl) phthalate	10	10	ug/L	U
HN01	HIS74509	03/13/03	Bromodichloromethane	5	5	ug/L	U
HN01	HIS74509	03/13/03	Bromoform	5	5	ug/L	U
HN01	HIS74509	03/13/03	Bromomethane	10	10	ug/L	U
HN01	HIS74509	03/13/03	Butyl benzyl phthalate	10	10	ug/L	U
HN01	HIS74509	03/13/03	Carbazole	10	10	ug/L	U
HN01	HIS74509	03/13/03	Carbon disulfide	1	5	ug/L	J
HN01	HIS74509	03/13/03	Carbon tetrachloride	5	5	ug/L	U
HN01	HIS74509	03/13/03	Chlorobenzene	5	5	ug/L	U
HN01	HIS74509	03/13/03	Chlorodibromomethane	5	5	ug/L	U
HN01	HIS74509	03/13/03	Chloroethane	10	10	ug/L	U
HN01	HIS74509	03/13/03	Chloroform	5	5	ug/L	U
HN01	HIS74509	03/13/03	Chloromethane	10	10	ug/L	U
HN01	HIS74509	03/13/03	Chrysene	10	10	ug/L	U
HN01	HIS74509	03/13/03	cis-1,3-Dichloropropene	5	5	ug/L	U
HN01	HIS74509	03/13/03	Dibenzo(a,h)anthracene	10	10	ug/L	U
HN01	HIS74509	03/13/03	Dibenzofuran	10	10	ug/L	U
HN01	HIS74509	03/13/03	Diethyl phthalate	10	10	ug/L	U
HN01	HIS74509	03/13/03	Dimethyl phthalate	10	10	ug/L	U
HN01	HIS74509	03/13/03	Di-n-butyl phthalate	10	10	ug/L	U
HN01	HIS74509	03/13/03	Di-n-octyl phthalate	10	10	ug/L	U
HN01	HIS74509	03/13/03	Ethylbenzene	5	5	ug/L	U
HN01	HIS74509	03/13/03	Fluoranthene	10	10	ug/L	U
HN01	HIS74509	03/13/03	Fluorene	10	10	ug/L	U
HN01	HIS74509	03/13/03	Hexachlorobenzene	10	10	ug/L	U
HN01	HIS74509	03/13/03	Hexachlorobutadiene	10	10	ug/L	U
HN01	HIS74509	03/13/03	Hexachlorocyclopentadiene	10	10	ug/L	U
HN01	HIS74509	03/13/03	Hexachloroethane	10	10	ug/L	U
HN01	HIS74509	03/13/03	Indeno(1,2,3-cd)pyrene	10	10	ug/L	U
HN01	HIS74509	03/13/03	Isophorone	10	10	ug/L	U
HN01	HIS74509	03/13/03	Methylene chloride	2.0999999	5	ug/L	UJ
HN01	HIS74509	03/13/03	Naphthalene	10	10	ug/L	U
HN01	HIS74509	03/13/03	Nitrobenzene	10	10	ug/L	U
HN01	HIS74509	03/13/03	N-Nitroso-di-n-propylamine	10	10	ug/L	U

StationName	SampleName	SampleCollectionDate	AnalyteName	AnalyticalResult	DetectionLimit	AnalyticalResultsUnits	ValidationQualifier
HN01	HIS74509	03/13/03	N-Nitrosodiphenylamine	10	10	ug/L	U
HN01	HIS74509	03/13/03	Pentachlorophenol	25	25	ug/L	U
HN01	HIS74509	03/13/03	Phenanthrene	10	10	ug/L	U
HN01	HIS74509	03/13/03	Phenol	10	10	ug/L	U
HN01	HIS74509	03/13/03	Pyrene	10	10	ug/L	U
HN01	HIS74509	03/13/03	Radium-226	0.49000001	3.6099999	pCi/L	UJ
HN01	HIS74509	03/13/03	Settleable Solids (SS)	0	0.2	mL/L/hr	U
HN01	HIS74509	03/13/03	Styrene	0.81999999	5	ug/L	J
HN01	HIS74509	03/13/03	Tetrachloroethene	5	5	ug/L	U
HN01	HIS74509	03/13/03	Thorium-228	0.61000001	1.4	pCi/L	UJ
HN01	HIS74509	03/13/03	Thorium-230	6.52	0.98000002	pCi/L	=
HN01	HIS74509	03/13/03	Thorium-232	0.15000001	0.41	pCi/L	UJ
HN01	HIS74509	03/13/03	Toluene	5	5	ug/L	U
HN01	HIS74509	03/13/03	Total Organic Carbon (TOC)	12.6	2	mg/L	=
HN01	HIS74509	03/13/03	Total Organic Halogens (TOX)	29.4	5	ug/L	R
HN01	HIS74509	03/13/03	trans-1,3-Dichloropropene	5	5	ug/L	U
HN01	HIS74509	03/13/03	Trichloroethene	5	5	ug/L	U
HN01	HIS74509	03/13/03	Uranium-234	20.309999	0.85000002	pCi/L	=
HN01	HIS74509	03/13/03	Uranium-235	-0.19	2.3099999	pCi/L	UJ
HN01	HIS74509	03/13/03	Uranium-238	18.67	0.83999997	pCi/L	=
HN01	HIS74509	03/13/03	Vinyl chloride	5	5	ug/L	U
HN01	HIS74509	03/13/03	Xylenes, total	10	10	ug/L	U
HN02	HIS74392	01/03/03	Settleable Solids (SS)	0	0.2	mL/L/hr	U
HN02	HIS74507	02/14/03	Settleable Solids (SS)	0.1	0.2	mL/L/hr	U
HN02	HIS74510	03/13/03	1,1,1-Trichloroethane	5	5	ug/L	U
HN02	HIS74510	03/13/03	1,1,2,2-Tetrachloroethane	5	5	ug/L	U
HN02	HIS74510	03/13/03	1,1,2-Trichloro-1,2,2-trifluoroethane	5	5	ug/L	U
HN02	HIS74510	03/13/03	1,1,2-Trichloroethane	5	5	ug/L	U
HN02	HIS74510	03/13/03	1,1-Dichloroethane	5	5	ug/L	U
HN02	HIS74510	03/13/03	1,1-Dichloroethene	5	5	ug/L	U
HN02	HIS74510	03/13/03	1,2,4-Trichlorobenzene	10	10	ug/L	U
HN02	HIS74510	03/13/03	1,2-Dichlorobenzene	10	10	ug/L	U
HN02	HIS74510	03/13/03	1,2-Dichloroethane	5	5	ug/L	U
HN02	HIS74510	03/13/03	1,2-Dichloroethene (Total)	10	10	ug/L	U
HN02	HIS74510	03/13/03	1,2-Dichloropropane	5	5	ug/L	U
HN02	HIS74510	03/13/03	1,3-Dichlorobenzene	10	10	ug/L	U
HN02	HIS74510	03/13/03	1,4-Dichlorobenzene	10	10	ug/L	U
HN02	HIS74510	03/13/03	2,4,5-Trichlorophenol	10	10	ug/L	U
HN02	HIS74510	03/13/03	2,4,6-Trichlorophenol	10	10	ug/L	U
HN02	HIS74510	03/13/03	2,4-Dichlorophenol	10	10	ug/L	U
HN02	HIS74510	03/13/03	2,4-Dimethylphenol	10	10	ug/L	U
HN02	HIS74510	03/13/03	2,4-Dinitrophenol	25	25	ug/L	U
HN02	HIS74510	03/13/03	2,4-Dinitrotoluene	10	10	ug/L	U
HN02	HIS74510	03/13/03	2,6-Dinitrotoluene	10	10	ug/L	U

StationName	SampleName	SampleCollectionDate	AnalyteName	AnalyticalResult	DetectionLimit	AnalyticalResultsUnits	ValidationQualifier
HN02	HIS74510	03/13/03	2-Butanone	20	20	ug/L	U
HN02	HIS74510	03/13/03	2-Chloronaphthalene	10	10	ug/L	U
HN02	HIS74510	03/13/03	2-Chlorophenol	10	10	ug/L	U
HN02	HIS74510	03/13/03	2-Hexanone	20	20	ug/L	U
HN02	HIS74510	03/13/03	2-Methylnaphthalene	10	10	ug/L	U
HN02	HIS74510	03/13/03	2-Methylphenol	10	10	ug/L	U
HN02	HIS74510	03/13/03	2-Nitroaniline	25	25	ug/L	U
HN02	HIS74510	03/13/03	2-Nitrophenol	10	10	ug/L	U
HN02	HIS74510	03/13/03	3,3'-Dichlorobenzidine	10	10	ug/L	U
HN02	HIS74510	03/13/03	3-Nitroaniline	25	25	ug/L	U
HN02	HIS74510	03/13/03	4,6-Dinitro-2-methylphenol	25	25	ug/L	U
HN02	HIS74510	03/13/03	4-Bromophenyl phenyl ether	10	10	ug/L	U
HN02	HIS74510	03/13/03	4-Chloro-3-methylphenol	10	10	ug/L	U
HN02	HIS74510	03/13/03	4-Chloroaniline	10	10	ug/L	U
HN02	HIS74510	03/13/03	4-Chlorophenyl phenyl ether	10	10	ug/L	U
HN02	HIS74510	03/13/03	4-Methyl-2-pentanone	20	20	ug/L	U
HN02	HIS74510	03/13/03	4-Methylphenol	20	20	ug/L	U
HN02	HIS74510	03/13/03	4-Nitroaniline	25	25	ug/L	U
HN02	HIS74510	03/13/03	4-Nitrophenol	25	25	ug/L	U
HN02	HIS74510	03/13/03	Acenaphthene	10	10	ug/L	U
HN02	HIS74510	03/13/03	Acenaphthylene	10	10	ug/L	U
HN02	HIS74510	03/13/03	Acetone	3.9000001	20	ug/L	J
HN02	HIS74510	03/13/03	Anthracene	10	10	ug/L	U
HN02	HIS74510	03/13/03	Benzene	5	5	ug/L	U
HN02	HIS74510	03/13/03	Benzo(a)anthracene	10	10	ug/L	U
HN02	HIS74510	03/13/03	Benzo(a)pyrene	10	10	ug/L	U
HN02	HIS74510	03/13/03	Benzo(b)fluoranthene	10	10	ug/L	U
HN02	HIS74510	03/13/03	Benzo(g,h,i)perylene	10	10	ug/L	U
HN02	HIS74510	03/13/03	Benzo(k)fluoranthene	10	10	ug/L	U
HN02	HIS74510	03/13/03	Bis(2-chloroethoxy) methane	10	10	ug/L	U
HN02	HIS74510	03/13/03	Bis(2-chloroethyl) ether	10	10	ug/L	U
HN02	HIS74510	03/13/03	Bis(2-chloroisopropyl) ether	10	10	ug/L	U
HN02	HIS74510	03/13/03	Bis(2-ethylhexyl) phthalate	10	10	ug/L	U
HN02	HIS74510	03/13/03	Bromodichloromethane	5	5	ug/L	U
HN02	HIS74510	03/13/03	Bromoform	5	5	ug/L	U
HN02	HIS74510	03/13/03	Bromomethane	10	10	ug/L	U
HN02	HIS74510	03/13/03	Butyl benzyl phthalate	10	10	ug/L	U
HN02	HIS74510	03/13/03	Carbazole	10	10	ug/L	U
HN02	HIS74510	03/13/03	Carbon disulfide	0.57999993	5	ug/L	J
HN02	HIS74510	03/13/03	Carbon tetrachloride	5	5	ug/L	U
HN02	HIS74510	03/13/03	Chlorobenzene	5	5	ug/L	U
HN02	HIS74510	03/13/03	Chlorodibromomethane	5	5	ug/L	U
HN02	HIS74510	03/13/03	Chloroethane	10	10	ug/L	U
HN02	HIS74510	03/13/03	Chloroform	5	5	ug/L	U

StationName	SampleName	SampleCollectionDate	AnalyteName	AnalyticalResult	DetectionLimit	AnalyticalResultsUnits	ValidationQualifier
HN02	HIS74510	03/13/03	Chloromethane	10	10	ug/L	U
HN02	HIS74510	03/13/03	Chrysene	10	10	ug/L	U
HN02	HIS74510	03/13/03	cis-1,3-Dichloropropene	5	5	ug/L	U
HN02	HIS74510	03/13/03	Dibenzo(a,h)anthracene	10	10	ug/L	U
HN02	HIS74510	03/13/03	Dibenzofuran	10	10	ug/L	U
HN02	HIS74510	03/13/03	Diethyl phthalate	10	10	ug/L	U
HN02	HIS74510	03/13/03	Dimethyl phthalate	10	10	ug/L	U
HN02	HIS74510	03/13/03	Di-n-butyl phthalate	10	10	ug/L	U
HN02	HIS74510	03/13/03	Di-n-octyl phthalate	10	10	ug/L	U
HN02	HIS74510	03/13/03	Ethylbenzene	5	5	ug/L	U
HN02	HIS74510	03/13/03	Fluoranthene	10	10	ug/L	U
HN02	HIS74510	03/13/03	Fluorene	10	10	ug/L	U
HN02	HIS74510	03/13/03	Hexachlorobenzene	10	10	ug/L	U
HN02	HIS74510	03/13/03	Hexachlorobutadiene	10	10	ug/L	U
HN02	HIS74510	03/13/03	Hexachlorocyclopentadiene	10	10	ug/L	U
HN02	HIS74510	03/13/03	Hexachloroethane	10	10	ug/L	U
HN02	HIS74510	03/13/03	Indeno(1,2,3-cd)pyrene	10	10	ug/L	U
HN02	HIS74510	03/13/03	Isophorone	10	10	ug/L	U
HN02	HIS74510	03/13/03	Methylene chloride	1.9	5	ug/L	UJ
HN02	HIS74510	03/13/03	Naphthalene	10	10	ug/L	U
HN02	HIS74510	03/13/03	Nitrobenzene	10	10	ug/L	U
HN02	HIS74510	03/13/03	N-Nitroso-di-n-propylamine	10	10	ug/L	U
HN02	HIS74510	03/13/03	N-Nitrosodiphenylamine	10	10	ug/L	U
HN02	HIS74510	03/13/03	Pentachlorophenol	25	25	ug/L	U
HN02	HIS74510	03/13/03	Phenanthrene	10	10	ug/L	U
HN02	HIS74510	03/13/03	Phenol	10	10	ug/L	U
HN02	HIS74510	03/13/03	Pyrene	10	10	ug/L	U
HN02	HIS74510	03/13/03	Radium-226	0.36000001	2.4000001	pCi/L	UJ
HN02	HIS74510	03/13/03	Settleable Solids (SS)	0	0.2	mL/L/hr	U
HN02	HIS74510	03/13/03	Styrene	5	5	ug/L	U
HN02	HIS74510	03/13/03	Tetrachloroethene	5	5	ug/L	U
HN02	HIS74510	03/13/03	Thorium-228	1.4400001	1.47	pCi/L	U
HN02	HIS74510	03/13/03	Thorium-230	5.23	0.43000001	pCi/L	=
HN02	HIS74510	03/13/03	Thorium-232	0.16	0.43000001	pCi/L	UJ
HN02	HIS74510	03/13/03	Toluene	5	5	ug/L	U
HN02	HIS74510	03/13/03	Total Organic Carbon (TOC)	6.1999998	1	mg/L	=
HN02	HIS74510	03/13/03	Total Organic Halogens (TOX)	4.0999999	5	ug/L	R
HN02	HIS74510	03/13/03	trans-1,3-Dichloropropene	5	5	ug/L	U
HN02	HIS74510	03/13/03	Trichloroethene	5	5	ug/L	U
HN02	HIS74510	03/13/03	Uranium-234	58.48	1.42	pCi/L	=
HN02	HIS74510	03/13/03	Uranium-235	3.79	2.1500001	pCi/L	J
HN02	HIS74510	03/13/03	Uranium-238	61.759998	1.98	pCi/L	=
HN02	HIS74510	03/13/03	Vinyl chloride	5	5	ug/L	U
HN02	HIS74510	03/13/03	Xylenes, total	10	10	ug/L	U

StationName	SampleName	SampleCollectionDate	AnalyteName	AnalyticalResult	DetectionLimit	AnalyticalResultsUnits	ValidationQualifier
HN03	HIS74508	02/14/03	Settleable Solids (SS)	0	0.2	mL/L/hr	U
HN03	HIS74511	03/13/03	1,1,1-Trichloroethane	5	5	ug/L	U
HN03	HIS74511	03/13/03	1,1,2,2-Tetrachloroethane	5	5	ug/L	U
HN03	HIS74511	03/13/03	1,1,2-Trichloro-1,2,2-trifluoroethane	5	5	ug/L	U
HN03	HIS74511	03/13/03	1,1,2-Trichloroethane	5	5	ug/L	U
HN03	HIS74511	03/13/03	1,1-Dichloroethane	5	5	ug/L	U
HN03	HIS74511	03/13/03	1,1-Dichloroethene	5	5	ug/L	U
HN03	HIS74511	03/13/03	1,2,4-Trichlorobenzene	10	10	ug/L	U
HN03	HIS74511	03/13/03	1,2-Dichlorobenzene	10	10	ug/L	U
HN03	HIS74511	03/13/03	1,2-Dichloroethane	5	5	ug/L	U
HN03	HIS74511	03/13/03	1,2-Dichloroethene (Total)	10	10	ug/L	U
HN03	HIS74511	03/13/03	1,2-Dichloropropane	5	5	ug/L	U
HN03	HIS74511	03/13/03	1,3-Dichlorobenzene	10	10	ug/L	U
HN03	HIS74511	03/13/03	1,4-Dichlorobenzene	10	10	ug/L	U
HN03	HIS74511	03/13/03	2,4,5-Trichlorophenol	10	10	ug/L	U
HN03	HIS74511	03/13/03	2,4,6-Trichlorophenol	10	10	ug/L	U
HN03	HIS74511	03/13/03	2,4-Dichlorophenol	10	10	ug/L	U
HN03	HIS74511	03/13/03	2,4-Dimethylphenol	10	10	ug/L	U
HN03	HIS74511	03/13/03	2,4-Dinitrophenol	25	25	ug/L	U
HN03	HIS74511	03/13/03	2,4-Dinitrotoluene	10	10	ug/L	U
HN03	HIS74511	03/13/03	2,6-Dinitrotoluene	10	10	ug/L	U
HN03	HIS74511	03/13/03	2-Butanone	20	20	ug/L	U
HN03	HIS74511	03/13/03	2-Chloronaphthalene	10	10	ug/L	U
HN03	HIS74511	03/13/03	2-Chlorophenol	10	10	ug/L	U
HN03	HIS74511	03/13/03	2-Hexanone	20	20	ug/L	U
HN03	HIS74511	03/13/03	2-Methylnaphthalene	10	10	ug/L	U
HN03	HIS74511	03/13/03	2-Methylphenol	10	10	ug/L	U
HN03	HIS74511	03/13/03	2-Nitroaniline	25	25	ug/L	U
HN03	HIS74511	03/13/03	2-Nitrophenol	10	10	ug/L	U
HN03	HIS74511	03/13/03	3,3'-Dichlorobenzidine	10	10	ug/L	U
HN03	HIS74511	03/13/03	3-Nitroaniline	25	25	ug/L	U
HN03	HIS74511	03/13/03	4,6-Dinitro-2-methylphenol	25	25	ug/L	U
HN03	HIS74511	03/13/03	4-Bromophenyl phenyl ether	10	10	ug/L	U
HN03	HIS74511	03/13/03	4-Chloro-3-methylphenol	10	10	ug/L	U
HN03	HIS74511	03/13/03	4-Chloroaniline	10	10	ug/L	U
HN03	HIS74511	03/13/03	4-Chlorophenyl phenyl ether	10	10	ug/L	U
HN03	HIS74511	03/13/03	4-Methyl-2-pentanone	20	20	ug/L	U
HN03	HIS74511	03/13/03	4-Methylphenol	20	20	ug/L	U
HN03	HIS74511	03/13/03	4-Nitroaniline	25	25	ug/L	U
HN03	HIS74511	03/13/03	4-Nitrophenol	25	25	ug/L	U
HN03	HIS74511	03/13/03	Acenaphthene	10	10	ug/L	U
HN03	HIS74511	03/13/03	Acenaphthylene	10	10	ug/L	U
HN03	HIS74511	03/13/03	Acetone	5	20	ug/L	J
HN03	HIS74511	03/13/03	Anthracene	10	10	ug/L	U

StationName	SampleName	SampleCollectionDate	AnalyteName	AnalyticalResult	DetectionLimit	AnalyticalResultsUnits	ValidationQualifier
HN03	HIS74511	03/13/03	Benzene	5	5	ug/L	U
HN03	HIS74511	03/13/03	Benzo(a)anthracene	10	10	ug/L	U
HN03	HIS74511	03/13/03	Benzo(a)pyrene	10	10	ug/L	U
HN03	HIS74511	03/13/03	Benzo(b)fluoranthene	10	10	ug/L	U
HN03	HIS74511	03/13/03	Benzo(g,h,I)perylene	10	10	ug/L	U
HN03	HIS74511	03/13/03	Benzo(k)fluoranthene	10	10	ug/L	U
HN03	HIS74511	03/13/03	Bis(2-chloroethoxy) methane	10	10	ug/L	U
HN03	HIS74511	03/13/03	Bis(2-chloroethyl) ether	10	10	ug/L	U
HN03	HIS74511	03/13/03	Bis(2-chloroisopropyl) ether	10	10	ug/L	U
HN03	HIS74511	03/13/03	Bis(2-ethylhexyl) phthalate	10	10	ug/L	U
HN03	HIS74511	03/13/03	Bromodichloromethane	5	5	ug/L	U
HN03	HIS74511	03/13/03	Bromoform	5	5	ug/L	U
HN03	HIS74511	03/13/03	Bromomethane	10	10	ug/L	U
HN03	HIS74511	03/13/03	Butyl benzyl phthalate	10	10	ug/L	U
HN03	HIS74511	03/13/03	Carbazole	10	10	ug/L	U
HN03	HIS74511	03/13/03	Carbon disulfide	5	5	ug/L	U
HN03	HIS74511	03/13/03	Carbon tetrachloride	5	5	ug/L	U
HN03	HIS74511	03/13/03	Chlorobenzene	5	5	ug/L	U
HN03	HIS74511	03/13/03	Chlorodibromomethane	5	5	ug/L	U
HN03	HIS74511	03/13/03	Chloroethane	10	10	ug/L	U
HN03	HIS74511	03/13/03	Chloroform	5	5	ug/L	U
HN03	HIS74511	03/13/03	Chloromethane	10	10	ug/L	U
HN03	HIS74511	03/13/03	Chrysene	10	10	ug/L	U
HN03	HIS74511	03/13/03	cis-1,3-Dichloropropene	5	5	ug/L	U
HN03	HIS74511	03/13/03	Dibenzo(a,h)anthracene	10	10	ug/L	U
HN03	HIS74511	03/13/03	Dibenzofuran	10	10	ug/L	U
HN03	HIS74511	03/13/03	Diethyl phthalate	10	10	ug/L	U
HN03	HIS74511	03/13/03	Dimethyl phthalate	10	10	ug/L	U
HN03	HIS74511	03/13/03	Di-n-butyl phthalate	10	10	ug/L	U
HN03	HIS74511	03/13/03	Di-n-octyl phthalate	10	10	ug/L	U
HN03	HIS74511	03/13/03	Ethylbenzene	5	5	ug/L	U
HN03	HIS74511	03/13/03	Fluoranthene	10	10	ug/L	U
HN03	HIS74511	03/13/03	Fluorene	10	10	ug/L	U
HN03	HIS74511	03/13/03	Hexachlorobenzene	10	10	ug/L	U
HN03	HIS74511	03/13/03	Hexachlorobutadiene	10	10	ug/L	U
HN03	HIS74511	03/13/03	Hexachlorocyclopentadiene	10	10	ug/L	U
HN03	HIS74511	03/13/03	Hexachloroethane	10	10	ug/L	U
HN03	HIS74511	03/13/03	Indeno(1,2,3-cd)pyrene	10	10	ug/L	U
HN03	HIS74511	03/13/03	Isophorone	10	10	ug/L	U
HN03	HIS74511	03/13/03	Methylene chloride	5	5	ug/L	U
HN03	HIS74511	03/13/03	Naphthalene	10	10	ug/L	U
HN03	HIS74511	03/13/03	Nitrobenzene	10	10	ug/L	U
HN03	HIS74511	03/13/03	N-Nitroso-di-n-propylamine	10	10	ug/L	U
HN03	HIS74511	03/13/03	N-Nitrosodiphenylamine	10	10	ug/L	U

StationName	SampleName	SampleCollectionDate	AnalyteName	AnalyticalResult	DetectionLimit	AnalyticalResultsUnits	ValidationQualifier
HN03	HIS74511	03/13/03	Pentachlorophenol	25	25	ug/L	U
HN03	HIS74511	03/13/03	Phenanthrene	10	10	ug/L	U
HN03	HIS74511	03/13/03	Phenol	10	10	ug/L	U
HN03	HIS74511	03/13/03	Pyrene	10	10	ug/L	U
HN03	HIS74511	03/13/03	Radium-226	1.45	1.9299999	pCi/L	UJ
HN03	HIS74511	03/13/03	Settleable Solids (SS)	0	0.2	mL/L/hr	U
HN03	HIS74511	03/13/03	Styrene	5	5	ug/L	U
HN03	HIS74511	03/13/03	Tetrachloroethene	5	5	ug/L	U
HN03	HIS74511	03/13/03	Thorium-228	1.87	1.37	pCi/L	J
HN03	HIS74511	03/13/03	Thorium-230	11.24	1.12	pCi/L	J
HN03	HIS74511	03/13/03	Thorium-232	0.56	0.5	pCi/L	U
HN03	HIS74511	03/13/03	Toluene	5	5	ug/L	U
HN03	HIS74511	03/13/03	Total Organic Carbon (TOC)	5.9000001	1	mg/L	=
HN03	HIS74511	03/13/03	Total Organic Halogens (TOX)	5.0999999	5	ug/L	R
HN03	HIS74511	03/13/03	trans-1,3-Dichloropropene	5	5	ug/L	U
HN03	HIS74511	03/13/03	Trichloroethene	5	5	ug/L	U
HN03	HIS74511	03/13/03	Uranium-234	2.5999999	0.69999999	pCi/L	J
HN03	HIS74511	03/13/03	Uranium-235	0	0.87	pCi/L	U
HN03	HIS74511	03/13/03	Uranium-238	0.64999998	1.55	pCi/L	UJ
HN03	HIS74511	03/13/03	Vinyl chloride	5	5	ug/L	U
HN03	HIS74511	03/13/03	Xylenes, total	10	10	ug/L	U

U indicates that the analyte was analyzed for but was not detected above the reported sample quantitation limit.

J indicates that the analyte was positively identified. The associated numerical value is the approximate concentration of the analyte in the sample.

UJ indicates the analyte was not detected above the minimum detectable value (limit). However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

= indicates that the analyte has been positively identified and the associated concentration value is accurate.

R indicates that the data are unusable or analyte may or may not be present.

ATTACHMENT B

QUARTERLY DISCHARGE MONITORING REPORT FOR THE ST. LOUIS AIRPORT SITE

First Quarter Stormwater Discharge Monitoring Report
St. Louis Airport Site (SLAPS), St. Louis, MO

FACILITY NAME	PERMIT NUMBER	COUNTY	OWNER	FACILITY CONTACT
St. Louis Airport Site (SLAPS)	No permit exists, currently working to the ARAR provided 10/02/98	St. Louis	U.S. Army Corps of Engineers, St. Louis District	S.R. Cotner, Program Manager, USACE
OPERATOR OF FACILITY			TYPE OF FACILITY	
United States Army Corps of Engineers (USACE)			Standard Industrial Classification–9999, non-classifiable	
REQUIRED FREQUENCY OF MONITORING				THIS REPORT COVERS
Flow-monthly, 24 hour estimate; Effluent Parameters- *Chemical and radiological* [1]: monthly during rainfall that results in a discharge; *Radiological* [2]: per rainfall event that results in a discharge; *Radon* -semi-annually during rainfall that results in a discharge; Monitoring Report-quarterly				1st Quarter- January 1, 2003 - March 31, 2003
SAMPLES COLLECTED BY				
Baywest and Pangea personnel				
ANALYSIS PERFORMED BY				
ARDL for chemical analysis; HISS on-site laboratory for radiological analysis; Radon in water analysis performed by General Engineering Laboratories.				

SAMPLE LOCATION	EVENT [3] 1	EVENT 2	EVENT 3	EVENT 4	EVENT 5
Outfall 001a	01/06/03 - 01/08/03	02/14/03 - 02/15/03	02/19/03 - 02/21/03	03/13/03 - 03/14/03	03/19/03 - 03/21/03
Outfall 002	[4]	[4]	[4]	[4]	[4]
Outfall 003	[12]	[12]	[12]	[12]	[12]
SAMPLE LOCATION					
Outfall 001a					
Outfall 002					
Outfall 003					

REPORT APPROVED BY OWNER Sharon Cotner for US Army Corps of Engineers DATE 4-24-03

NOTES: (NUMBERING SYSTEM HAS BEEN KEPT CONSISTENT ON EACH PAGE TO REDUCE CONFUSION)

[1] Collect monthly grab samples for the following parameters: oil and grease, total petroleum hydrocarbons, pH, chemical oxygen demand, settleable solids, total recoverable arsenic, total recoverable lead, total recoverable chromium, total recoverable copper, total recoverable cadmium, polychlorinated biphenyls, total uranium, total radium, total thorium, gross alpha, gross beta, protactinium-231, and actinium-227.

[2] Collect grab samples per rainfall event for the following parameters: total uranium, total radium, total thorium, gross alpha, gross beta, protactinium-231, and actinium-227.

[3] An event is defined as a measurable increase in discharge rate from precipitation producing 0.1 inch or more of liquid in a 24 hour period, or from pumping operation (such as following treatment). An event may exceed duration of 24 hours, and two events experienced within 48 hours may be reported together.

[4] As per MDNR letter from Matthew Sikes addressed to Sharon Cotner dated 02/19/02, sampling at outfall 002 has been reduced to once a year.

[5] ND = No Discharge

[6] Results are reported in required units.

[7] DL= Detection Limit

[8] Value reported is based on a volume weighted average of analyte activity concentrations for samples collected during the defined event. Corresponding radiological samples were collected on the same date as chemical samples, however, the radiological results are incorporated into the volume weighted average for the specified event.

[9] As specified in the permit, radionuclides require monitoring only, and limits are not permit specified.

[10] Total nuclide values in ug/L units were calculated using the activity concentration values reported by the laboratory and values for specific activity listed in Table 8.4.1 of The Health Physics and Radiological Health Handbook, 1992 Edition

[11] It is assumed that Ra-228 and Th-228 are in secular equilibrium with Th-232, therefore, Th-232 results are used to estimate Ra-228 and Th-228 values.

[12] As per MDNR letter from Matthew Sikes addressed to Sharon Cotner dated 02/19/02, sampling at outfall 003 has been discontinued.

[13] Waiting on data results from the laboratory

[14] Auto sampler did not collect sufficient volume for the Chemical Parameters.

2003 First Quarter-Stormwater Discharge Monitoring Report - Outfall 001a
St. Louis Airport Site (SLAPS), St. Louis, MO

MONITORING PARAMETER	FINAL EFFLUENT LIMITATIONS		UNITS[6]	ANALYTICAL RESULTS						SAMPLE TYPE	REMARKS and COMMENTS
	Daily Maximum	Monthly Average		Outfall 001a							
				Chemical Parameters							
				January		February		March			
Flow	Monitor only	Monitor only	MGD	[14]		0.017		[13]		24-hr estimate	
Oil and Grease	15	10	mg/L	[14]		non-detect		[13]		Grab	
Total Petroleum Hydrocarbons	10	10	mg/L	[14]		non-detect		[13]		Grab	
pH-Units	6.0-9.0	NA	SU	[14]		7.3		[13]		Grab	
Chemical Oxygen Demand	120	90	mg/L	[14]		non-detect		[13]		Grab	
Settleable Solids	1.5	1	mL/L/hr	[14]		non-detect		[13]		Grab	DL[7] = 0.1 mL/L/hr
Arsenic, Total Recoverable	100	100	µg/L	[14]		non-detect		[13]		Grab	
Lead, Total Recoverable	190	190	µg/L	[14]		non-detect		[13]		Grab	
Chromium, Total Recoverable	280	280	µg/L	[14]		non-detect		[13]		Grab	
Copper, Total Recoverable	84	84	µg/L	[14]		non-detect		[13]		Grab	
Cadmium, Total Recoverable	94	94	µg/L	[14]		non-detect		[13]		Grab	
Polychlorinated Biphenyls	No release	No release	µg/L	[14]		non-detect		[13]		Grab	DL[7] = 1 µg/L
				Radiological Parameters[8,11]							
				Event 1	Event 2	Event 3	Event 4	Event 5	[redacted]		
Uranium, Total[9,10]	Monitor only	Monitor only	µg/L	2.6E+02	3.1E+02	1.8E+02	8.6E+01	1.7E+02	[redacted]	Grab	Calculated estimates
Radium, Total[9,10]	Monitor only	Monitor only	µg/L	2.E-06	3.E-06	4.E-06	3.E-06	2.E-06	[redacted]	Grab	Calculated estimates
Thorium, Total[9,10]	Monitor only	Monitor only	µg/L	5.E+00	4.E+00	4.E+00	2.E+00	6.E-01	[redacted]	Grab	Calculated estimates
Gross Alpha[9]	Monitor only	Monitor only	pCi/L	1.9E+02	3.2E+02	1.9E+02	1.0E+02	1.4E+02	[redacted]	Grab	
Gross Beta[9]	Monitor only	Monitor only	pCi/L	4.E+01	5.E+01	2.E+01	3.E+01	4.E+01	[redacted]	Grab	
Protactinium-231[9]	Monitor only	Monitor only	pCi/L	3.E-02	7.E-02	4.E-02	1.E-01	1.E-01	[redacted]	Grab	
Actinium-227[9]	Monitor only	Monitor only	pCi/L	3.E-02	7.E-02	4.E-02	1.E-01	1.E-01	[redacted]	Grab	
Radon	Monitor only	Monitor only	pCi/L	1.E+02	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	Grab	

NOTES: (NUMBERING SYSTEM HAS BEEN KEPT CONSISTENT ON EACH PAGE TO REDUCE CONFUSION)

[5] ND = No Discharge

[6] Results are reported in required units.

[7] DL= Detection Limit

[8] Value reported is based on a volume weighted average of analyte activity concentrations for samples collected during the defined event. Corresponding radiological samples were collected on the same date as chemical samples, however, the radiological results are incorporated into the volume weighted average for the specified event.

[9] As specified in the permit, radionuclides require monitoring only, and limits are not permit specified.

[10] Total nuclide values in ug/L units were calculated using the activity concentration values reported by the laboratory and values for specific activity listed in Table 8.4.1 of The Health Physics and Radiological Health Handbook, 1992 Edition

[11] It is assumed that Ra-228 and Th-228 are in secular equilibrium with Th-232, therefore, Th-232 results are used to estimate Ra-228 and Th-228 values.

[12] As per MDNR letter from Matthew Sikes addressed to Sharon Cotner dated 02/19/02, sampling at outfall 003 has been discontinued.

[13] Waiting on data results from the laboratory.

[14] Auto sampler did not collect sufficient volume for the Chemical Parameters.

RAINFALL DATA FOR SLAPS

Date 2003	(inches) 24-hour total	Outfall 001a*	Outfall 002**	Outfall 3***
1-Jan	0.9[S]			
2-Jan	4.0[S]			
3-Jan	0			
4-Jan	0			
5-Jan	Trace			
6-Jan	0	0.024		
7-Jan	0			
8-Jan	0	0.0079		
9-Jan	0			
10-Jan	0			
11-Jan	0			
12-Jan	0			
13-Jan	0			
14-Jan	0			
15-Jan	0			
16-Jan	0.03			
17-Jan	0			
18-Jan	0			
19-Jan	0			
20-Jan	0			
21-Jan	0			
22-Jan	1.3[S]			
23-Jan	0			
24-Jan	Trace			
25-Jan	0			
26-Jan	Trace			
27-Jan	0			
28-Jan	0			
29-Jan	0.01			
30-Jan	0			
31-Jan	Trace			
Monthly Average		0.001		

Date 2003	(inches) 24-hour total	Outfall 001a*	Outfall 002**	Outfall 3***
1-Feb	0			
2-Feb	0			
3-Feb	0.01			
4-Feb	0.01			
5-Feb	0			
6-Feb	0.11			
7-Feb	0			
8-Feb	0			
9-Feb	0.04			
10-Feb	Trace			
11-Feb	0			
12-Feb	0			
13-Feb	0			
14-Feb	0.51	0.017		
15-Feb	0.41	0.023		
16-Feb	0.16			
17-Feb	0			
18-Feb	0			
19-Feb	0.18	0.091		
20-Feb	0	0.079		
21-Feb	0	0.027		
22-Feb	0.15			
23-Feb	0.20			
24-Feb	Trace			
25-Feb	0			
26-Feb	Trace			
27-Feb	0.14			
28-Feb	0.06			
Monthly Average		0.008		

Date 2003	(inches) 24-hour total	Outfall 001a*	Outfall 002**	Outfall 3***
1-Mar	0.01			
2-Mar	0			
3-Mar	0			
4-Mar	Trace			
5-Mar	0.05			
6-Mar	Trace			
7-Mar	0			
8-Mar	0			
9-Mar	0			
10-Mar	0			
11-Mar	0			
12-Mar	0.07			
13-Mar	0.69	0.056		
14-Mar	0	0.019		
15-Mar	0			
16-Mar	Trace			
17-Mar	0			
18-Mar	0.05			
19-Mar	0.99	0.078		
20-Mar	0.19	0.081		
21-Mar	0.01	0.062		
22-Mar	0			
23-Mar	Trace			
24-Mar	0			
25-Mar	0.03			
26-Mar	0			
27-Mar	0			
28-Mar	0.30			
29-Mar	Trace			
30-Mar	0			
31-Mar	0			
Monthly Average		0.010		

Notes:

Flow measurements for the three outfalls are reported in million gallons per day (MGD) and reported to two significant digits. All blank spaces represent zero flow.

*A flow meter and automatic sampler are currently installed at Outfall 001a. Outfall 001b is an emergency spillway only.

** Outfall 002 is sampled annually per MDNR letter dated 2/19/02, as a result flow is not measured until a sample is collected.

*** As per MDNR letter from Matthew Sikes addressed to Sharon Cotner dated 02/19/02, sampling at outfall 003 has been discontinued.

[S] denotes snow

CASE NARRATIVE AND RESULTS SUMMARY

FOR THE HAZELWOOD INTERIM STORAGE SITE

FUSRAP Laboratory
8945 Latty Ave.
Berkeley, MO 63134
(314) 260-3900

February 25, 2003

SAIC
500 NW Plaza, Ste. 1000
St. Ann, MO 63074

Case Narrative

File # 03ML006

Sample Receipt

This data package contains 2 samples received from the Hazelwood Interim Storage Site on January 3, 2003.

Analytical Methods

Settleable solids analysis was performed in accordance with procedure ML-020.

Data Qualifiers

Data qualifier flags appear in the Results Summary if a sample's reported results are questionable. A "U" qualifier denotes that the activity reported is below the minimum detectable activity or that the isotope is not positively identified. A "N" qualifier denotes that the spike recovery is not within 80% to 120% for a Liquid or 70% to 130% for a solid. A "*" qualifier denotes poor duplicate results. A "J" qualifier denotes that the isotope was positively identified, however the reported values are estimated due to problems or unusual circumstances noted in this case narrative.

Initial calibrations, quality control samples, and daily quality control checks are within specified criteria or have been assigned the appropriate qualifier as required.

Problems or Unusual Occurrences

Samples in this batch were received as having 0.9 liters of water. This is below the 1 liter

volume as stated in procedure ML-020. Results should be considered estimated.

Certification of Accuracy

I certify that this data report is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the cognizant project manager or his/her designee to be accurate as verified by the following signature.

Brad Wilson
Assistant Laboratory Manager

FUSRAP Laboratory
8945 Latty Ave.
Berkeley, MO 63134
(314) 260-3900

March 25, 2003

SAIC
500 NW Plaza, Ste. 1000
St. Ann, MO 63074

Case Narrative

File # 03ML044

Sample Receipt

This data package contains 13 samples received from the Hazelwood Interim Storage Site on January 28, February 26 and 28, and March 3, 4, and 13, 2003.

Analytical Methods

Alpha spectroscopy with the Claude Sill method of fluoride fusion was used to analyze ^{228}Th, ^{230}Th, and ^{232}Th. This analysis was performed in accordance with procedure ML-005. The method blank for ^{230}Th is often greater than 2 times the respective MDA. This is because of the close proximity of the ^{229}Th tracer causes attenuated counts to overlap into the ^{230}Th region of interest.

Alpha spectroscopy with the Claude Sill method of fluoride fusion was used to analyze ^{234}U, ^{235}U, and ^{238}U. The analysis was performed in accordance with procedure ML-015.

Alpha spectroscopy with the Claude Sill method of fluoride fusion was used to analyze isotopic ^{226}Ra. The analysis was performed in accordance with procedure ML-006.

Settleable solids analysis was performed in accordance with procedure ML-020.

Data Qualifiers

Data qualifier flags appear in the Results Summary if a sample's reported results are questionable. A "U" qualifier denotes that the activity reported is below the minimum detectable activity or that the isotope is not positively identified. A "N" qualifier denotes

that the spike recovery is not within 80% to 120% for a Liquid or 70% to 130% for a solid. A "*" qualifier denotes poor duplicate results. A "J" qualifier denotes that the isotope was positively identified, however the reported values are estimated due to problems or unusual circumstances noted in this case narrative.

Initial calibrations, quality control samples, and daily quality control checks are within specified criteria or have been assigned the appropriate qualifier as required.

Problems or Unusual Occurrences

There were no problems or unusual circumstances associated with this sample delivery group.

Often, the ^{235}U LCS will be outside the liquid and solid limits listed above and thus, flagged with an "N" qualifier. This is usually due to the small amount of activity being too low for an accurate statistical comparison between the true and found activities.

Certification of Accuracy

I certify that this data report is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the cognizant project manager or his/her designee to be accurate as verified by the following signature.

Wendy Corley 3/25/03

Wendy Corley
Assistant Laboratory Manager

Case Narrative
LOT NUMBER: **F3C140185**

This report contains the analytical results for the three samples received under chain of custody by STL St. Louis on March 13, 2003. These samples are associated with your FUSRAP project.

All applicable quality control procedures met method-specified acceptance criteria except as noted below.

This report is incomplete without the case narrative. All results are based upon sample as received, wet weight, unless noted otherwise.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

Affected Samples:
F3C140185 (1): HIS74509

Affected Methods:
450.1

Case Narrative:
The sample exhibited breakthrough due to sample matrix. Original results are reported.

Affected Samples:
F3C140185 (1): HIS74509
F3C140185 (2): HIS74510
F3C140185 (3): HIS74511

Affected Methods:
8260B

Case Narrative:
The LCS recoveries are outside QC limits for less than 10% of the compounds spiked. Laboratory QC practices, based on federal guidance documents, allow for up to 10% of the spike compounds to be outside QC criteria without necessitating re-preparation/re-analysis. Sample purge efficiency and compliance is demonstrated by the remaining acceptable LCS recoveries.

METHODS SUMMARY

F3C140185

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Semivolatile Organic Compounds by GC/MS	SW846 8270C	SW846 3510C
Total Organic Carbon	MCAWW 415.1	MCAWW 415.1
Total Organic Halogens	MCAWW 450.1	MCAWW 450.1
Volatile Organics by GC/MS	SW846 8260B	SW846 5030

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F3C140185

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
FJ6GF	001	HIS74509	03/13/03	11:10
FJ6G1	002	HIS74510	03/13/03	11:25
FJ6G5	003	HIS74511	03/13/03	10:20

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

FUSRAP Document Management System

Year: 00 ID: 3579

Further Info? ☐

Operating Unit: North County

Site:

Area:

MARKS Number: FN:1110-1-8100g

Primary Document Type: Site Management

Secondary Document Type: Correspondence

Subject or Title: Transmittal of First Quarter of 2003 Discharge Report for NPDES Permit MO-0111252 and Applicable or Relevant and Appropriate Requirements (ARARs) for Discharges to the Waters of the State in North St. Louis County, MO

Author/Originator: Sharon Cotner

Company: CEMVS-PM-R

Date: 4/25/2003

Recipient (s): Kurt Rebelling

Company (-ies): MDNR

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